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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,822	06/11/2001	Michael D. Sandoe	71264-6	6873
20915	7590	10/22/2003	EXAMINER	
MCGARRY BAIR PC 171 MONROE AVENUE, N.W. SUITE 600 GRAND RAPIDS, MI 49503			PIERCE, JEREMY R	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/681,822	SANDOE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jeremy R. Pierce	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-32,34-51 and 61-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-11,16,17,25-32,34-43 and 61-67 is/are rejected.
- 7) ☒ Claim(s) 12-15,18-24 and 44-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's Amendment filed on August 15, 2003 has been entered. Claims 59 and 60 have been cancelled. Claims 61, 62, and 64-66 have been amended. New claim 67 has been added. The amendment is sufficient to withdraw the 35 USC 112 rejections set forth in the last Office Action.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 2-11, 16, 17, 25-31, 34-38, 40, 42, 43, and 61-67 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Kerrebrouck (U.S. Patent No. 6,066,388).

Van Kerrebrouck discloses two outer fiber layers and one inner fiber layers, both constructed of binder fibers and constructive fibers (column 2, lines 45-54). The denier

of the binder fibers and constructive fibers in the outer layer is between 0.5 and 28 dtex (column 3, lines 43 and 49). The denier of the binder fibers of the inner layer is between 3 and 40 dtex (column 3, line 46). The denier of the constructive fibers of the inner layer is between 3 and 100 dtex (column 3, line 52). When the outer layers are constructed with 0.5 dtex fibers, they would have less by weight "fine fibers" than the fibers of the inner layer, because fibers having a denier between 0.8 and 3.0 would be fewer. The binder fibers could act as either the claimed binder fibers or the claimed other fibers. With regard to claims 2 and 34, Van Kerrebrouck discloses using polyester, polyamide, and polyolefin (column 3, lines 58-60). With regard to claims 3, 10, and 35, Van Kerrebrouck discloses using bi-component fibers (column 5, lines 1-7). With regard to claims 6, 8, and 40, the core layer may have a basis weight of 400 grams per square meter (column 8, line 52). With regard to claims 7 and 9, the 10 mm outer layer and the 15 mm core layer would satisfy the thickness requirements of the unmolded laminate. With regard to claim 11, single-component binding fibers may be used (column 5, lines 1-7). With regard to claims 16 and 17, Van Kerrebrouck discloses impregnating the laminate with binder and adding finishing layers (column 6, lines 17-24). With regard to claim 26, the outer layers are needed to be denser than the core layer (column 8, lines 24-33). With regard to claims 27 and 61, since the needling is only done to the outer layers, and Van Kerrebrouck disclose the needling only goes 10 mm deep into a 35 mm composite (column 8, lines 30-40), one can conclude that the outer layer is thinner at 10 mm than the core layer at 15 mm. With regard to claims 28 and 67, the denser formation of the outer layers would make them less resistive. With

regard to claims 29-31 and 62-64, the ranges of the dtex of the fibers in the outer layer indicate that less than 20% of the fibers could be fine and more than 25% of the core layer fibers could be fine (column 3, lines 42-54). With regard to claims 42 and 43, the binder fibers would act as a thermosetting resin.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kerrebrouck.

With regard to claims 39 and 41, Van Kerrebrouck does not disclose the thickness of the core layer after molding. However, adjusting thickness of the mold is an obvious modification to a person having ordinary skill in the art because the desirability of a different thickness could be easily adjusted in the molding process. It would have been obvious to one having ordinary skill in the art to make the core layer between 0.1 and 1.3 inches thick after molding, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Kerrebrouck in view of Matsukawa et al.

Van Kerrebrouck teaches the fibers of the core layer can be 3 dtex, but does not specifically say it can be below. Matsukawa et al. disclose that increased sound

absorbing performance can be achieved by using fibers with a denier of not more than 2 (column 2, lines 1-6). It would have been obvious to one having ordinary skill in the art to include fibers with a denier of not more than 2 in the article of Van Kerrebrouck in order to improve the sound absorbing performance of the article, as taught by Matsukawa et al.

***Allowable Subject Matter***

7. Claims 12-15, 18-24, and 44-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's arguments filed on August 15, 2003 have been fully considered but they are not persuasive.

9. Applicant argues that Van Kerrebrouck teach using more fine fibers by weight in the outer layer than in the inner layer and that the range of thicker fibers is primarily in the inner layer. Applicant points out that this teaching is in direct contrast with the present invention of claims 65 and 66. The Examiner, for the most part agrees with Applicant's argument. However, the "fine fibers" of Applicant's claims are defined to be within the range of 0.8 and 3.0 denier. Van Kerrebrouck teaches the outer layers may comprise fibers with a dtex of 0.5. While this value is finer than 0.8 and 3.0 denier, it still falls outside the range of Applicant's claimed "fine fibers." The outer layers of Van Kerrebrouck have "less by weight fine fibers" than the inner layer because there is less by weight fibers with a denier in the range of 0.8 and 3.0. Applicant previously

discussed with the Examiner in the interview conducted on August 7, 2003 that the "fine fibers" are not meant to be limited to the range of 0.8 and 3.0 denier, but meant to cover fine fibers generally, as in fibers with a denier of less than 4. However, the "fine fiber" limitation is already defined in the claim as fibers having a denier between 0.8 and 3.0. Two separate definitions to "fine fibers" cannot be read into the same claim. Therefore, Applicant's request to have the "fine fiber" limitation read as fibers with a denier of below 4 is not possible. Although the concepts of Applicant's invention and the Van Kerrebrouck reference are different, the claim needs to be amended to more clearly define the outer layer as having coarser fibers than the core layer. Once the distinction is clearly made, the rejection using the Van Kerrebrouck reference can be dropped.

10. Applicant makes various arguments concerning dependent claims by saying that Van Kerrebrouck does not teach the claimed limitations. With regard to claims 2 and 34, Van Kerrebrouck teach polyamide (column 3, line 59), which is nylon. With regard to claims 4, 5, 36, and 37, Van Kerrebrouck discloses binder fibers within the claimed ranges (column 3, lines 42-54). With regard to claims 6, 8, and 40, Van Kerrebrouck disclose the claimed weight ranges (column 8, line 52). With regard to claims 16 and 17, a "web" of adhesive does not define any specific structure for an adhesive layer, so impregnation of the composite with adhesive would meet the limitation.

11. Applicant argues that nothing in Van Kerrebrouck teaches or suggests the thickness of the outer layers and that nothing suggests that the depth of needling is equivalent to the depth of the outer layers. Applicant states that the Examiner presumes, without basis, that the 10 mm penetration of the needling in Van Kerrebrouck

equals the depth of the outer layers. However, Van Kerrebrouck clearly states that the needles are "adjusted to penetrate only into the outer layers of the nonwoven, in particular the penetration of the needles reaching a thickness of 10 mm" (column 8, lines 27-30). Without any teaching to the contrary, one can safely assume that the outer layers are about 10 mm thick, thus leaving the core layer at 15 mm. This assumption is not without basis, as it seems to follow straightforward reasoning based on the information given.

12. Applicant argues that it would not be obvious to modify the thickness of a molded product, and that a reference must be cited to support the assertion to the contrary. However, adjusting the thickness of a mold would be an obvious modification to a person having ordinary skill in the art. Molds are used for various purposes to fit into various sized things. A person in the art would have the knowledge to adjust the thickness of the mold in order to better size the article for application in its intended use.

### ***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

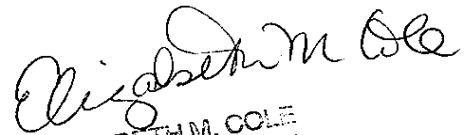
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce  
Examiner  
Art Unit 1771

October 20, 2003

  
ELIZABETH M. COLE  
PRIMARY EXAMINER